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PATENT NO.
                   KIND DATE
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                     A2
PΙ
    WO 2001032928
                          20010510
                                        WO 2000-US30474 20001103
    WO 2001032928
                    A3
                          20020725
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
            CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR.
            HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
            LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
            SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
            YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
            DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
            BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRAI US 1999-165398P P
                         19991105
    US 2000-196571P P
                          20000411
AΒ
    The invention discloses methods, gene databases, gene arrays, protein
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arrays, and devices that may be used to det. the hypersensitivity of individuals to a given agent, such as drug or other chem., in order to prevent toxic side effects. In one embodiment, methods of identifying hypersensitivity in a subject by obtaining a gene expression profile of multiple genes assocd. with hypersensitivity of the subject suspected to be hypersensitive, and identifying in the gene expression profile of the subject a pattern of gene expression of the genes assocd. with hypersensitivity are disclosed. The gene expression profile of the subject may be compared with the gene expression profile of a normal individual and a hypersensitive individual. The gene expression profile of the subject that is obtained may comprise a profile of levels of mRNA or cDNA. The gene expression profile may be obtained by using an array of nucleic acid probes for the plurality of genes assocd. with hypersensitivity. The expression of the genes predetd. to be assocd. with hypersensitivity is directly related to prevention or repair of toxic damage at the tissue, organ or system level. Gene databases arrays and app. useful for identifying hypersensitivity in a subject are also disclosed.

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(FILE 'HOME' ENTERED AT 21:16:24 ON 30 NOV 2003)

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L1
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L2
              5 S L1 (P) MICROARRAY#
L3
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L4
          41591 S (GLUCOCORTICOSTEROID# OR GLUCOSTEROID# OR CORTICOSTEROID# OR
L5
             47 S L4 (5A) RESPONSIVENESS
L6
             10 S L5 (P) (RNA OR MRNA OR NUCLEIC OR CDNA OR DNA OR OLIGONUCLEOT
I.7
              3 S L5 (9A) DETERMINING
     FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 21:23:04 ON 30 NOV 2003
\Gamma8
         554259 S (GLUCOCORTICOSTEROID# OR GLUCOSTEROID# OR CORTICOSTEROID# OR
L9
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L10
              4 S L9 (9A) DETERMINING
L11
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L12
            374 S L11 (9A) DETERMIN?
L13
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             16 S L13 AND (RNA OR MRNA)
L15
            202 S L13 AND PY<2001
L16
            202 DUP REM L15 (0 DUPLICATES REMOVED)
L17
             20 S L11 AND SAA#
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ab

L18 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2003 ACS on STN

## Full Citing Text References

AN 2002:506123 CAPLUS

DN 137:123900

- TI Differential glucocorticoid enhancement of the cytokine-driven transcriptional activation of the human acute phase serum amyloid A genes, SAA1 and SAA2
- AU Thorn, Caroline F.; Whitehead, Alexander S.
- CS Department of Pharmacology and Center for Pharmacogenetics, University of Pennsylvania School of Medicine, Philadelphia, PA, 19104, USA
- SO Journal of Immunology (2002), 169(1), 399-406 CODEN: JOIMA3; ISSN: 0022-1767
- PB American Association of Immunologists
- DT Journal
- LA English
- AB The human acute phase serum amyloid A (A-SAA) genes, SAA1 and SAA2, have a high degree of sequence identity that extends  $\sim 450$  bp upstream of their transcription start sites. Each promoter contains analogously positioned functional binding sites for the transcription factors NF-KB and NF-IL6. In human HepG2 hepatoma cells transfected with SAA promoter luciferase reporter constructs, administration of IL-1 and IL-6, singly or in combination, induced SAA1 and SAA2 transcriptional readouts that were qual. indistinguishable. under induced conditions, the SAA2 promoter had a significant quant. transcriptional advantage over the SAA1 promoter. The application of the synthetic glucocorticoid dexamethasone in the context of cytokine stimulation enhanced the transcriptional activity of the SAA1, but not the SAA2, promoter such that readout from the former became equiv. to that from the latter. A putative glucocorticoid response element (GRE) is present (between residues -208 and -194) only in the SAA1 gene; a similar sequence in the corresponding region of the SAA2 gene is disrupted by a nine-residue insertion. The SAA1 GRE was shown to be functionally active and the SAA2 disrupted GRE was shown to be functionally inactive in expts. using reporter constructs carrying SAA1 and SAA2 promoters that had been modified by site-specific mutagenesis. Quant. anal. of transcript-specific RT-PCR products, derived from SAA1 and SAA2 mRNAs after treatment of HepG2 cells with cytokines in the presence or absence of dexamethasone, confirmed that the endogenous SAA1 gene has a cytokine-driven transcriptional disadvantage that is superseded by a marginal transcriptional advantage when glucocorticoids are present.

RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2003 ACS on STN

## Full Citing Text References

AN 2001:338762 CAPLUS

DN 134:362292

- TI Methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile
- IN Farr, Spencer
- PA Phase-1 Molecular Toxicology, USA
- SO PCT Int. Appl., 222 pp. CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

- L2 ANSWER 1 OF 1 MEDLINE on STN
- AN 96185283 MEDLINE
- DN 96185283 PubMed ID: 8606597
- TI Presymptomatic diagnosis of familial steroid-resistant nephrotic syndrome.
- AU **Fuchshuber A**; Janssen F; Gribouval O; Niaudet P; Kamoun A; Antignac C
- SO **LANCET**, (1996 Apr 13) 347 (9007) 1050-1. Journal code: 2985213R. ISSN: 0140-6736.
- CY ENGLAND: United Kingdom
- DT Letter
- LA English
- FS Abridged Index Medicus Journals; Priority Journals
- EM 199605
- ED Entered STN: 19960531

Last Updated on STN: 19960531 Entered Medline: 19960517

- L8 ANSWER 20 OF 47 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
- AN 1996:378928 BIOSIS
- DN PREV199699101284
- TI The glucocorticoid insensitivity syndrome.
- AU Lamberts, S. W. J.
- CS Dep. Med., University Hospital Dijkzigt, Dr. Molewaterplein 40, NL-3015 GD Rotterdam, Netherlands
- SO Hormone Research (Basel), (1996) Vol. 45, No. SUPPL. 1, pp. 2-4. CODEN: HRMRA3. ISSN: 0301-0163.
- DT Article
- LA English
- ED Entered STN: 26 Aug 1996 Last Updated on STN: 26 Aug 1996
- AΒ Recent studies demonstrate that primary (hereditary) abnormalities in the glucocorticoid receptor gene make 6.6% of the normal population relatively 'hypersensitive' to glucocorticoids, while 2.3% are relatively 'resistant'. These abnormalities might explain the well-known phenomenon that some individuals develop severe adverse effects during therapy with a low dose of glucocorticosteroids, while others do not develop side effects even during long-term therapy with a much higher dose. This heterogeneity in glucocorticoid sensitivity in the normal population might eventually allow the prediction of a 'safe' dose of glucocorticosteroids in individual patients. 'Resistance' to the beneficial clinical effects of glucocorticosteroid therapy in some patients with severe rheumatoid arthritis and asthma is probably seldom related to generalized primary (hereditary) glucocorticoid resistance. In most patients this 'resistance' seems to be acquired and localized to the inflammation sites, where it is caused by high local cytokine production which interferes with glucocorticoid action. Recognition of localized, acquired glucocorticoid resistance is of great importance, as alternative drug therapy with other immune-modulating drugs, such as cyclosporin and methotrexate, should be considered. Chronic high-dose glucocorticosteroid treatment in such patients insufficiently reduces symptomatology, while generalized side effects occur, as the rest of the body of the patient has a normal sensitivity to these drugs.